

**SEARCH REQUEST FORM**

Scientific and Technical Information Center

Requester's Full Name: Sin J. Lee Examiner #: 76060 Date: 10-13-04  
 Art Unit: 1752 Phone Number 302-1333 Serial Number: 10/803,435  
 Mail Box and Bldg/Room Location: 4060 Results Format Preferred (circle): PAPER DISK E-MAIL

**If more than one search is submitted, please prioritize searches in order of need.**

\*\*\*\*\*

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Photosensitive composition for manufacturing optical waveguide, production method thereof & polymer optical waveguide

Inventors (please provide full names):

Seiji, Toyoda; Saburo, Imamura; Saburo, Tomaru; Saburo, Kurihara; Saburo, Enbutsu; Saburo, Hayashida; Saburo, Maruno Pattern formation method using the same

Earliest Priority Filing Date: 3-18-04

*\*For Sequence Searches Only\* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.*

Please search for a silicone oligomer (or polymer)  
of the formula (4)

→ All claim # 12.

Toyoda, Seiji  
Imamura, Saburo  
Tomaru, Saburo  
Kurihara, Takashi  
Enbutsu, Koji  
Hayashida, Shoichi  
Maruno, Tohru

**STAFF USE ONLY**

Searcher: Ed  
 Searcher Phone #: \_\_\_\_\_  
 Searcher Location: \_\_\_\_\_  
 Date Searcher Picked Up: \_\_\_\_\_  
 Date Completed: 10-15-04  
 Searcher Prep & Review Time: 5  
 Clerical Prep Time: \_\_\_\_\_  
 Online Time: 75

**Type of Search**

NA Sequence (#) \_\_\_\_\_ STN \_\_\_\_\_  
 AA Sequence (#) \_\_\_\_\_ Dialog \_\_\_\_\_  
 Structure (#) ✓ (A) Questel/Orbit \_\_\_\_\_  
 Bibliographic ✓ (arch) Dr. Link \_\_\_\_\_  
 Litigation \_\_\_\_\_ Lexis/Nexis \_\_\_\_\_  
 Fulltext \_\_\_\_\_ Sequence Systems \_\_\_\_\_  
 Patent Family \_\_\_\_\_ WWW/Internet \_\_\_\_\_  
 Other \_\_\_\_\_ Other (specify) \_\_\_\_\_

**Vendors and cost where applicable**

\$ 282.05

=> file reg

FILE 'REGISTRY' ENTERED AT 20:24:17 ON 15 OCT 2004  
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=> d his

FILE 'LREGISTRY' ENTERED AT 19:39:12 ON 15 OCT 2004

L1 STR  
L2 STR  
L3 STR L1

FILE 'REGISTRY' ENTERED AT 19:47:34 ON 15 OCT 2004

L4 0 S L3

FILE 'HCAPLUS' ENTERED AT 19:49:08 ON 15 OCT 2004

L5 6540 S TOYODA ?/AU  
L6 10217 S IMAMURA ?/AU  
L7 701 S TOMARU ?/AU  
L8 9076 S KURIHARA ?/AU  
L9 42 S ENBUTSU ?/AU  
L10 2999 S HAYASHIDA ?/AU  
L11 747 S MARUNO ?/AU  
L12 0 S L5 AND L6 AND L7 AND L8 AND L9 AND L10 AND L11  
L13 0 S L5 AND L6 AND L8 AND L10  
L14 5 S L7 AND L9 AND L11  
L15 3 S L14 AND (L5 OR L6 OR L8 OR L10)  
SEL L15 1-3 RN

FILE 'REGISTRY' ENTERED AT 19:52:16 ON 15 OCT 2004

L16 2 S E1-E2  
L17 1 S 220341-25-3  
L18 2 POLYLINK L17

FILE 'HCAPLUS' ENTERED AT 19:54:33 ON 15 OCT 2004

L19 47253 S WAVEGUID? OR WAVE#(2A)GUID?  
L20 333 S (L5-L11) AND L19  
L21 434 S TOYODA S?/AU  
L22 1182 S IMAMURA S?/AU  
L23 82 S TOMARU S?/AU  
L24 1524 S KURIHARA T?/AU  
L25 9 S ENBUTSU K?/AU  
L26 565 S HAYASHIDA S?/AU  
L27 178 S MARUNO T?/AU

L28 229 S (L21-L27) AND L19  
L29 191001 S ?SILOXAN? OR ?SILICONE?  
L30 47 S L28 AND L29  
SEL L30 1-47 RN

FILE 'REGISTRY' ENTERED AT 19:57:15 ON 15 OCT 2004  
L31 157 S E3-E159  
L32 71 S L31 AND SI/ELS

FILE 'LREGISTRY' ENTERED AT 19:59:37 ON 15 OCT 2004  
E BENZENE/CN  
L33 1 S E3  
L34 50160 S 46.150.18/RID

FILE 'REGISTRY' ENTERED AT 19:59:54 ON 15 OCT 2004  
L35 55 S L32 AND L34  
L36 28 S L35 AND 4/ELC.SUB  
L37 19 S L35 AND X/ELS AND 5/ELC.SUB  
L38 47 S L36 OR L37

FILE 'LREGISTRY' ENTERED AT 20:11:38 ON 15 OCT 2004  
L39 STR  
L40 STR  
L41 STR  
L42 STR L40  
L43 STR L39

FILE 'REGISTRY' ENTERED AT 20:20:00 ON 15 OCT 2004  
L44 1 S L41 AND L42 AND L43  
L45 58 S L41 AND L42 AND L43 FUL  
SAV L45 LEE435/A  
L46 5 S L45 AND PMS/CI  
L47 1 S L38 AND L46

FILE 'HCAPLUS' ENTERED AT 20:22:15 ON 15 OCT 2004  
L48 3 S L46  
L49 18 S L45  
L50 15 S L49 NOT L48  
L51 0 S L50 AND L19

FILE 'REGISTRY' ENTERED AT 20:24:17 ON 15 OCT 2004

=> d l45 que stat  
L41 STR

G1-Ak-G1  
1 2 3

VAR G1=O/CL

NODE ATTRIBUTES:

CONNECT IS E2 RC AT 2

DEFAULT MLEVEL IS ATOM

GGCAT IS SAT AT 2

DEFAULT ECLEVEL IS LIMITED

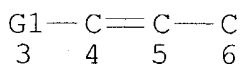
GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 3

STEREO ATTRIBUTES: NONE

L42 STR



VAR G1=O/CL

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

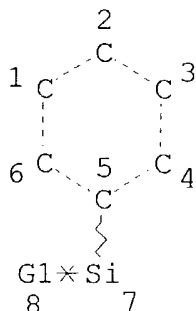
GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 4

STEREO ATTRIBUTES: NONE

L43 STR



VAR G1=O/CL

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 8

STEREO ATTRIBUTES: NONE

L45 58 SEA FILE=REGISTRY SSS FUL L41 AND L42 AND L43

100.0% PROCESSED 1375 ITERATIONS

58 ANSWERS

SEARCH TIME: 00.00.01

=> file hcaplus

FILE 'HCAPLUS' ENTERED AT 20:24:37 ON 15 OCT 2004

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=> d 148 1-3 ibib abs hitstr hitrn

L48 ANSWER 1 OF 3 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2002:727478 HCAPLUS

DOCUMENT NUMBER: 137:270178

TITLE: Production method of optical waveguide coupler  
with oligomer

INVENTOR(S): Haga, Yoshimasa; Imamura, Saburo; Tomaru, Akira;  
Hikita, Makoto; Hashimoto, Kazuko; Yamauchi,  
Atsushi; Sakuma, Ayako; Michikgchi, Masayuki;  
Tomiyoshi, Chie

PATENT ASSIGNEE(S): NTT Advanced Technology Corp., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2002277662	A2	<u>20020925</u>	JP 2001-72920	
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200103

14

PRIORITY APPLN. INFO.:

JP 2001-72920

200103

14

AB The invention refers to a prodn. method of an optical waveguide  
coupler using a reactive oligomer with easy pattern formation, heat

resistance and resistance to moisture, small birefringence, and superior processability to form thick cores or cores with different diams. on the same waveguide for simple prodn. of a easily connected coupler.

IT 220341-27-5

(prodn. method of optical waveguide coupler)

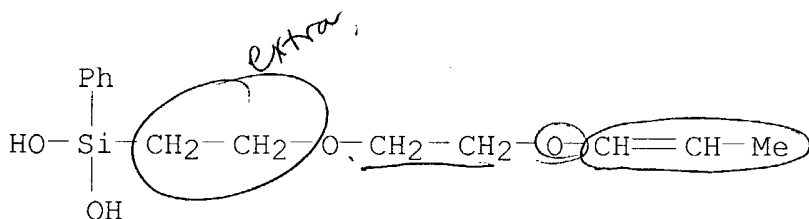
RN 220341-27-5 HCAPLUS

CN Silanediol, dimethyl-, polymer with phenyl[2-[2-(1-propenyloxy)ethoxy]ethyl]silanediol (9CI) (CA INDEX NAME)

CM 1

CRN 220341-26-4

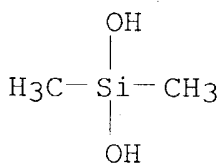
CMF C13 H20 O4 Si



CM 2

CRN 1066-42-8

CMF C2 H8 O2 Si



IT 220341-27-5

(prodn. method of optical waveguide coupler)

L48 ANSWER 2 OF 3 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1999:74467 HCAPLUS

DOCUMENT NUMBER: 130:175036

TITLE: Manufacture of optical device elements

INVENTOR(S): Imamura, Saburo; Tomaru, Akira; Kurihara, Takashi

PATENT ASSIGNEE(S): Nippon Telegraph and Telephone Corp., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.

DOCUMENT TYPE: CODEN: JKXXAF  
 LANGUAGE: Patent  
 FAMILY ACC. NUM. COUNT: Japanese 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11023886	A2	1999 <sup>01</sup> 29	JP 1997-178599	19970703
PRIORITY APPLN. INFO.:				19970703
				03

AB The manufg. process comprises the steps of: forming a mold having a rectangular groove with a step-up central segment; placing a pair of optical fibers into the groove with the ends facets at the steps; filling the gap between the facets with a 1st photopolymerizable liq.; forming the coupling core by polymg. the 1st liq.; coating the coupling core with a 2nd photopolymerizable liq., where the liqs. are typically (silicone) epoxy oligomers.

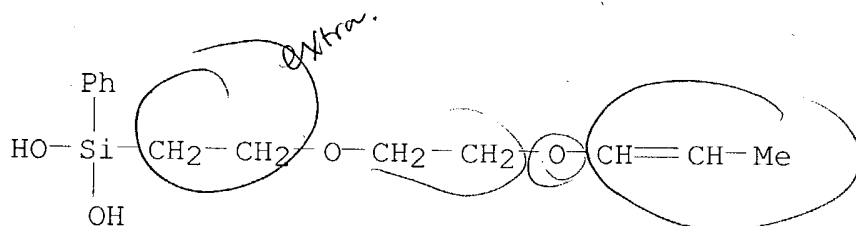
IT 220341-27-5  
 (manuf. of optical device elements)

RN 220341-27-5 HCAPLUS

CN Silanediol, dimethyl-, polymer with phenyl[2-[2-(1-propenyloxy)ethoxy]ethyl]silanediol (9CI) (CA INDEX NAME)

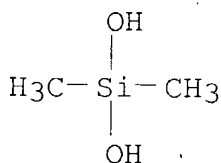
CM 1

CRN 220341-26-4  
 CMF C13 H20 O4 Si



CM 2

CRN 1066-42-8  
 CMF C2 H8 O2 Si



IT 220341-27-5

(manuf. of optical device elements)

L48 ANSWER 3 OF 3 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1995:1005430 HCAPLUS

DOCUMENT NUMBER: 124:87856

TITLE: Synthesis and Photopolymerization of 1-Propenyl Ether Functional Siloxanes

AUTHOR(S): Crivello, J. V.; Lohden, G.

CORPORATE SOURCE: Department of Chemistry, Rensselaer Polytechnic Institute, Troy, NY, 12180, USA

SOURCE: Chemistry of Materials (1996), 8(1), 209-18  
CODEN: CMATEX; ISSN: 0897-4756

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A variety of mono-, di-, and multifunctional 1-propenyl ether functional siloxanes were readily prepd. in high yields by the transition-metal-catalyzed condensation of .alpha.-(1-propenyl).omega.-vinyl ethers with various linear and cyclic H-functional siloxanes. Under these conditions, hydrosilation takes place regioselectively at the vinyl ether site of the .alpha.-(1-propenyl).omega.-vinyl ether. Using onium salt photoinitiators, these new monomers and oligomers undergo rapid polymn. under the influence of UV light. To study these very fast photopolymns., extensive use of Fourier transform real-time IR spectroscopy was made. Employing this technique, the effects of monomer and photoinitiator structure on the rates of polymn. were studied.

IT 172425-30-8P 172425-35-3P 172425-40-0P  
172425-45-5P

(prepn. and photopolymn. of propenyl ether functional siloxanes)

RN 172425-30-8 HCAPLUS

CN Trisiloxane, 3-[[dimethyl[2-[2-(1-propenyloxy)ethoxy]ethyl]silyl]oxy]-1,1,5,5-tetramethyl-3-phenyl-1,5-bis[2-[2-(1-propenyloxy)ethoxy]ethyl]-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 172425-03-5

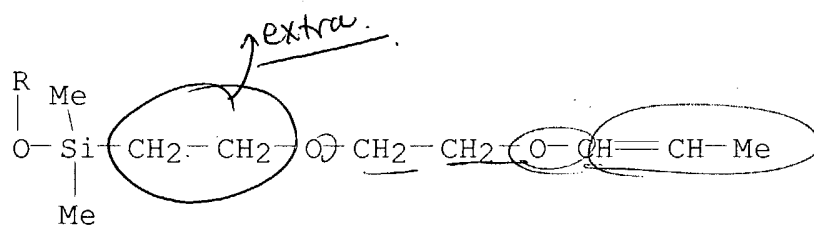
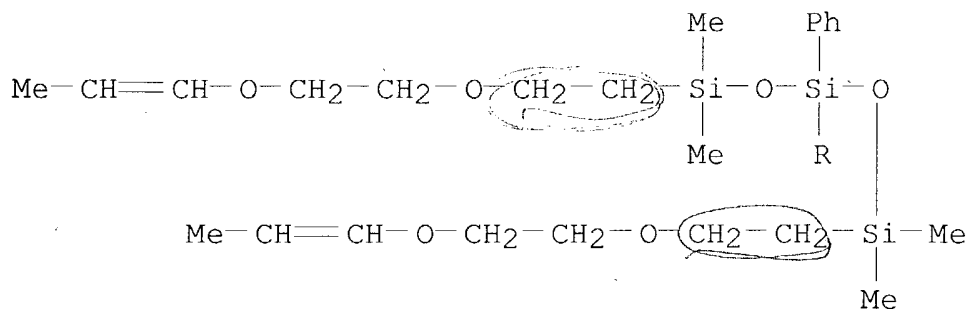
CMF C33 H62 O9 Si4

2t ~~has~~ has extra -CH<sub>2</sub>CH<sub>2</sub>

gp.

btwn. Si &amp; O





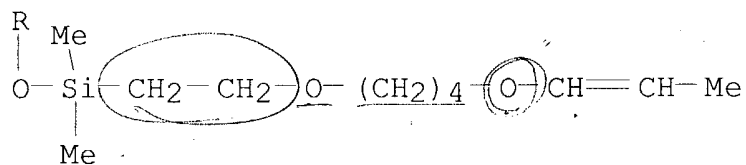
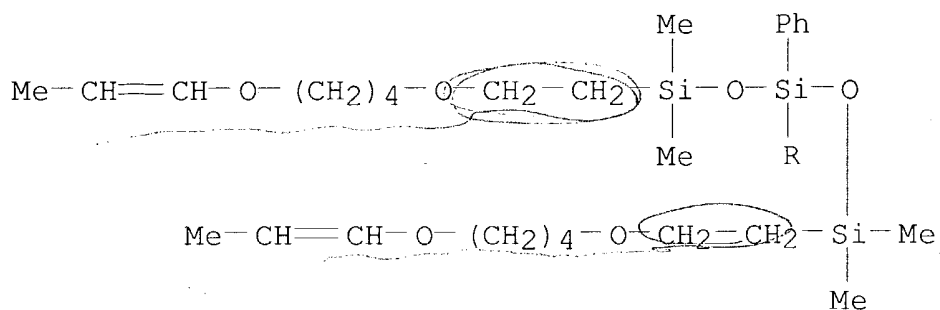
RN 172425-35-3 HCAPLUS

CN Trisiloxane, 3-[[dimethyl[2-[4-(1-propenyloxy)butoxy]ethyl]silyl]oxy]-1,1,5,5-tetramethyl-3-phenyl-1,5-bis[2-[4-(1-propenyloxy)butoxy]ethyl]-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 172425-08-0

CMF C39 H74 O9 Si4



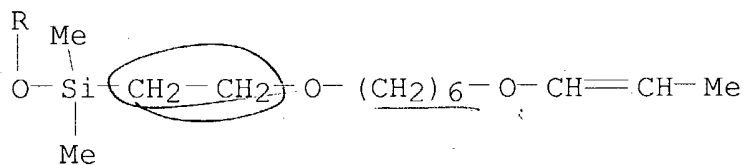
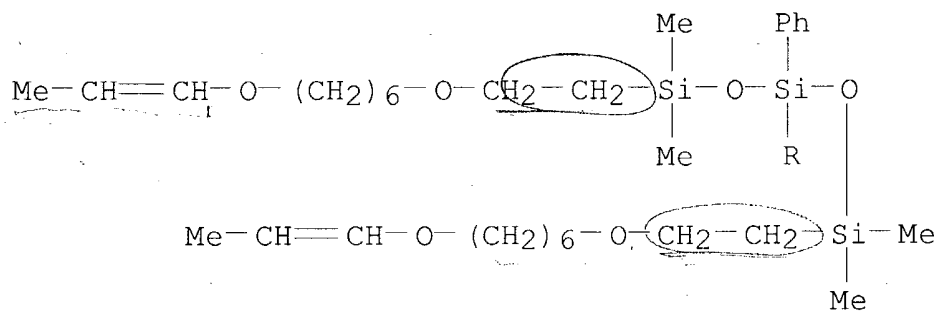
RN 172425-40-0 HCAPLUS

CN Trisiloxane, 3-[[dimethyl[2-[[6-(1-propenyloxy)hexyl]oxy]ethyl]silyl  
 ]oxy]-1,1,5,5-tetramethyl-3-phenyl-1,5-bis[2-[[6-(1-  
 propenyloxy)hexyl]oxy]ethyl]-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 172425-13-7

CMF C45 H86 O9 Si4



RN 172425-45-5 HCAPLUS

CN Trisiloxane, 3-[[dimethyl[2-[2-[2-(1-propenyloxy)ethoxy]ethoxy]ethyl  
 ]silyl]oxy]-1,1,5,5-tetramethyl-3-phenyl-1,5-bis[2-[2-[2-(1-  
 propenyloxy)ethoxy]ethoxy]ethyl]-, homopolymer (9CI) (CA INDEX  
 NAME)

CM 1

CRN 172425-18-2

CMF C39 H74 O12 Si4

